first motif, each at different spatial locations;

wherein each of the replications [replication includes] is spaced from the first motif and geometrically defined by at least one operation set selected from a group consisting of (a) scaling the size of said first motif, (b) rotating said first motif, and (c) translating said first motif; wherein each operation defining each replication [said replication excluding a set of operations on a motif in which each operation is] excludes those operations which are a function of and referenceable to the spatial location of a single point on said first motif;

and

a conductive element, spaced-apart from said first fractal antenna to influence at least one of resonant frequency and bandwidth of said antenna system.

2. (New) The antenna system according to claim 1, further comprising:

a transceiver coupled to the fractal antenna.

3. (New) An antenna system comprising:

an antenna arrangement including at least a part that is a fractal design, the fractal design including a first element having a portion that includes at least a first motif defined in at least two-dimensions, said portion further including at least a first replication of said first motif and a second replication of said first motif, such that a point chosen on a geometric figure represented by said first motif results in a corresponding point on said first replication and on said second replication of said first motif, each at different spatial locations;

wherein each of the replications is spaced from the first motif and geometrically defined by at least one operation set selected from a group consisting of (a) scaling the size of said first motif, (b) rotating said first motif, and (c) translating said first motif; wherein each operation defining each replication excludes those operations which are a function of and referenceable to the spatial location of a single point on said first motif;

and

a conductive element, spaced-apart from said first fractal antenna to influence at least one of resonant frequency and bandwidth of said antenna system.

4. (New) The antenna system of claim 3, further comprising:

a transceiver coupled to the antenna arrangement.

5. (New) A signal resonator system comprising:

a fractal antenna including a first element having a portion that includes at least a first motif defined in at least two-dimensions, said portion further including at least a first replication of said first motif and a second replication of said first motif, such that a point chosen on a geometric figure represented by said first motif results in a corresponding point on said first replication and on said second replication of said first motif, each at different spatial locations;

wherein each of the replications is spaced from the first motif and geometrically defined by at least one operation set selected from a group consisting of (a) scaling the size of said first motif, (b) rotating said first motif, and (c) translating said first motif; wherein each operation defining each replication excludes those operations which are a function of and referenceable to the spatial location of a single point on said first motif;

and

a conductive element, spaced-apart from said first fractal antenna to influence at least one of resonant frequency and bandwidth of said antenna system.

6. (New) A signal resonator according to claim 5, further comprising:

a transceiver coupled to the fractal antenna.

7. (New) A signal resonator system comprising:

an antenna arrangement including at least a part that is a fractal design, the fractal design including a first element having a portion that includes at least a first motif defined in at least two-dimensions, said portion further including at least a first replication of said first motif and a second replication of said first motif, such that a point chosen on a geometric figure represented by said first motif results in a corresponding point on said first replication and on said second replication of said first motif, each at different spatial locations;

wherein each of the replications is spaced from the first motif and geometrically defined by at least one operation set selected from a group consisting of (a) scaling the size of said first

motif, (b) rotating said first motif, and (c) translating said first motif; wherein each operation defining each replication excludes those operations which are a function of and referenceable to the spatial location of a single point on said first motif;
and

a conductive element, spaced-apart from said first fractal antenna to influence at least one of resonant frequency and bandwidth of said antenna system.

8. (New) The antenna system of claim 7, further comprising:

a transceiver coupled to the antenna arrangement.

9. (New) A method of making an antenna system including an antenna arrangement, comprising:

making the antenna arrangment so as to include a fractal antenna, the fractal antenna being arranged so as to include a first element having a portion that includes at least a first motif defined in at least two-dimensions, at least a first replication of said first motif and a second replication of said first motif, such that a point chosen on a geometric figure represented by said first motif results in a corresponding point on said first replication and on said second replication of said first motif, each at different spatial locations;

wherein each of the replications [replication includes] is spaced from the first motif and geometrically defined by at least one operation set selected from a group consisting of (a) scaling the size of said first motif, (b) rotating said first motif, and (c) translating said first motif; wherein each operation defining each replication excludes those operations which are a function of and referenceable to the spatial location of a single point on said first motif;
and

coupling a conductive element, spaced-apart from said antenna arrangement, to influence at least one of resonant frequency and bandwidth of said antenna system.

10. A method according to claim 9, further including:

coupling a transceiver to the antenna arrangement.